

Resistant organisms in meat and poultry

Under this title the "Deutsche Ärzteblatt" published a report in November 2001 under the heading "Actual, Acute < Antibiotics in Animal Fattening >". This article contained a reference to pathogenic organisms in US-American supermarket products. For the US population these pathogenic organisms represent a more dangerous threat when taking a product from the deep freezer of a supermarket than the risk of anthrax when opening a letter. Minced meat samples from supermarkets in Washington were tested for pathogenic organisms. 20 % of the purchased minced meat samples contained salmonella, which were up to 84 % resistant to antibiotics. Thus 86 % of all chickens purchased in US supermarkets also contained enterococci. Up to now the US agricultural industry is still allowed the unhindered use of antibiotics, and demands conclusive proof that the organisms contained in small concentrations in meat can be harmful to humans. It was shown that antibiotics-resistant *E. faecium* from the supermarket could still be detected in stool up to 14 days after a single ingestion. For this test 18 test persons drank the organism at a

tenfold dilution in a glass of milk. Although none became ill, according to the comments made, it now seems that the time has come for prohibition of animal fattening accelerators in the USA, too. Selection of organisms through fatty accelerators is an important reason for the development of resistance.



In Germany four antibiotics (avilamycin, flavomycin, salinomycin and monensin) are still permitted as performance promoters. Prohibition of these four antibiotics throughout the EU is targeted for 2003 at the latest. Avoparcin, bacitracin, spiramycin, tylosin and virginiamycin are already prohibited throughout the EU. Through the prohibition of avoparcin a decrease in resistance has been shown already after 1 ½ years.

About our products

RIDASCREEN® Chloramphenicol

In recent months chloramphenicol determinations have been of particular interest. The antibiotic chloramphenicol (CAP), which has been prohibited for veterinary use on animals for food supply within the EU since 1994, has been detected in shrimps imported from Vietnam, Indonesia and China. In Asia antibiotics, including CAP, have also been used prophylactically in shrimp cultures. If the required waiting times



before harvesting are not observed, CAP residues may be present in the shrimps. This is a problem with regard to export shrimps since CAP is prohibited throughout the EU and USA.





Furthermore, CAP, which has been illegally introduced into animal food, has also been detected, and a number of tests for CAP in meat have had to be carried out as a consequence. These findings were the reason for working out two additional supplementary sample preparation methods for CAP detection in shrimps / fish meal, as well as for the determination of CAP-glucuronide in urine.

Since we cannot supply a RIDASCREEN® CAP-glucuronide test at present, this sample preparation method - glucuronide-digest of the urine - gives you the possibility of detecting CAP-glucuronide in urine indirectly, using the RIDASCREEN® chloramphenicol test.

We will be pleased to supply you with the supplementary sample preparation methods on request. Please contact your local distributor or our marketing office, Mrs Ludwig: info@r-biopharm.de.



Frequent customer queries

Processing and updating of all product information leaflets takes up considerable time, and it is not always possible to modify everything at the same time. Therefore we would like to give you some information on our RIDASCREEN® ELISA tests here.

- Even though this has not been changed in all the product information leaflets, the volume of standard solution shown on the label is 1.3 ml (with all reagents the filled volume is higher than that indicated on the label).

- 1 M sulphuric acid is no longer used for the Stop Reagent, but 1 N sulphuric acid.

- In the RIDASCREEN® FAST mycotoxin tests and the mycotoxin EXPRESS tests reddish coloured chromogen/substrate solution (single component system) is always used. This solution should be protected from the light just like the separate chromogen solution. Any colour other than the reddish colouration indicates a deterioration of the reagent. This solution should then no longer be used.

- The stability of a test always depends on the result of the last quality test. The test is then given a lot no. and an expiry date on the kit package. This lot no. and the corresponding expiry date relate to the interaction of the individual reagents. It is quite possible for individual reagents of a test (e.g. the microtiter plate) to have longer stability than that

given on the kit package. However, these components must still not be used in the test for longer than the expiry date given on the kit package.

- Individual reagents from different batches (lot no. on the kit package) may be exchanged only if the same lot no. for the particular individual reagent is given on the label of the inventory list.

- The enzyme conjugate should always be mixed carefully, since it contains protein. Proteins develop foam if mixed too strongly, and proteins are frequently denatured when they foam.

- In carrying out the test, as a rule the standard or sample solution is pipetted first, and then the enzyme conjugate. Since the conjugate solution is coloured, it is easier to follow the pipette steps in this sequence.

- The washing steps are very important. The microwell holder should be tapped upside down vigorously on absorbent paper. In order to prevent drying out of the microtiter plates, tapping not more than three times in a row is recommended. The washing sequences should be followed exactly.

- If the pipetted reagents are mixed in single steps, this should take place only by gently rocking the plate manually. On no account should mixing be carried out on a microtiter plate mixer during the incubation periods. No mixing by means of photometer

adjustment should be carried out during measurement either. Extinctions can be increased to extremely high values in some tests through mixing. The same effect is also brought about, for example, by higher temperatures (than room temperature) during incubation.

- The substrate and chromogen solution (two component system) can also be mixed before this step (remove only as much solution as is required). The solution should then be pipetted immediately. This procedure saves a pipetting step.

- In quoting the sensitivity of a test generally the {standard 2} x the corresponding dilution factor, resulting from the corresponding sample preparation, is given as the detection limit. This is only a theoretical value; the matrix has not been taken into consideration here.

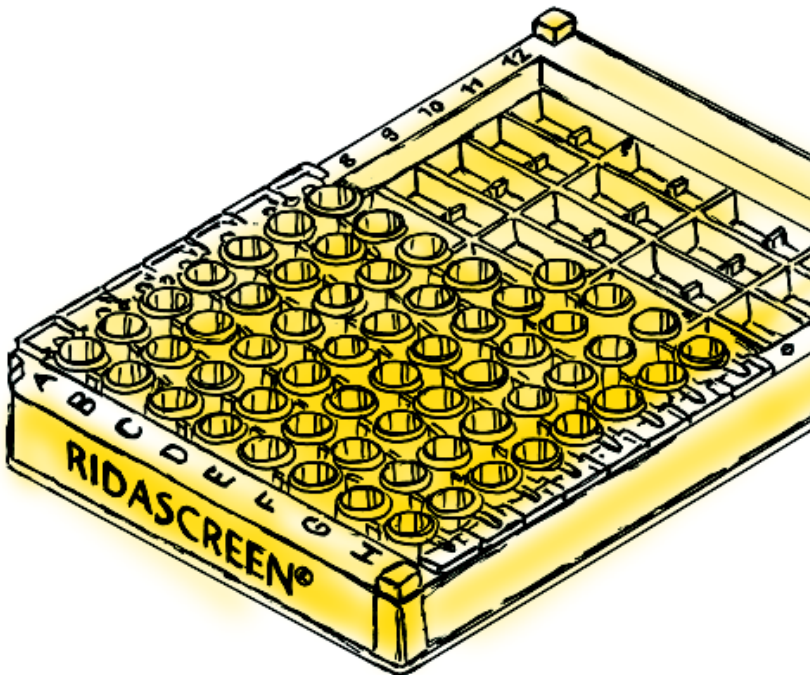
- In our indication of the concentration unit, the density of the liquid volume has not been taken into consideration. For solid matrices the value is given in µg/kg and for liquid matrices correspondingly in µg/l.

- Special software, the RIDA® Soft Win, has been developed by R-Biopharm for evaluating the RIDASCREEN® ELISA tests. This software permits quick, convenient evaluation of ELISA test systems. Through appropriate modifications, which are very easily carried out, this software can of course also be used for all freely definable ELISA tests.

- If single determinations are carried out (e.g. in the RIDASCREEN® FAST mycotoxin tests), Logit/Log should be used for evaluation. On the other hand, for the evaluation of double determinations the Cubic Spline evaluation is preferable. When carrying out a new test for the first time, double determinations should always be carried out as a personal check.

We recommend repeat determinations in principle for all tests apart from the RIDASCREEN® FAST mycotoxin tests.

For further questions do not hesitate to contact your local distributor.



About us

Within the framework of internal restructuring there will be some changes with regard to the spot customer service, which we would like to bring to your attention here. Mr. Marc Hübner, who up to now has looked after customers as a sales representative for all Germany, is now working 50 % of the time in the office and 50 % outside. His field of duties includes product management of two product groups - the RIDA®/RIDASCREEN® mycotoxin tests and the RIDASCREEN® allergen tests, as well as the PCR allergen tests of our cooperation partner CONGEN. He will also continue to carry out his outside activities for these product groups.

Dr. Walter Lübbe, up to now product manager of our RIDASCREEN® risk material tests and the SureFood® PCR-ELISA tests for detection of animal species, will in future take over additionally as product manager for our RIDASCREEN® anabolic hormone and antibiotic tests. Like Marc Hübner, he will also spend 50% of his activities outside in the field for these product groups.

ANALYTICA 2002 in Munich

This year, as in every other year, the Analytica, one of the most important trade fairs concerned with analytical techniques, is taking place in Munich. We are represented at this fair with a stand (Hall B3, Stand B3.234). This year we are presenting new features for you, and we would be very pleased to welcome a large number of our customers and interested persons at our stand.



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